

**QUADRATURE ERROR REDUCTION FOR QAM MODULATED**  
**UP OR DOWN CONVERSION**

**ABSTRACT OF THE DISCLOSURE**

A compensation circuit for phase modulation systems, such as QPSK and QAM systems, which compensates for phase errors in the I and Q components of the QPSK or QAM signals to minimize carry over of such phase errors in analog up and down conversions of such signals. In particular, the invention relates to a relatively simple circuit, which compensates for channel phase errors by providing a direct correction of one of the channels based on the measured correlation between the I and Q components, which should ideally be 0. As such, cross talk between I-Q channels is minimized, which improves the signal-to-noise ratio of transmitted and received QPSK or QAM signals.

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